REMARKS

Claims 1-15 are pending, with claims 1, 8, and 15 being in independent form.

In the Office Action, claims 1-15 stand rejected for obviousness over U.S. Patent No. 6,625,466 to Dicker et al. ("Dicker") in view of U.S. Patent No. 6,240,077 to Vuong et al. ("Vuong"). The Applicant believes the pending claims are allowable over the cited documents for the following reasons.

In accordance with the MPEP, three criteria must be met to establish a prima facie case of obviousness. First, the cited documents must describe or suggest all of the claim features. Second, there must be some suggestion or motivation, either in the cited documents themselves or in the knowledge generally available to one of ordinary skill in the art, to have combined the teachings of the cited documents. Third, there must have been a reasonable expectation that the documents could have been successfully combined to yield the claimed invention.

The rejections raised in the Action cannot stand at least because no combination of the cited documents describes or suggests all of the claim features. Motivations to combine the cited documents and reasonable expectations of successful combinations would also be absent, but it should be sufficient to point out the absent features.

For example, claim 1 recites, among other things, "if the performance parameter of the communication channel indicates that the performance of the communication link is unsatisfactory, then comparing, in the receiver, a signal strength indicator of a communication signal from the transmitter to a threshold" and "if the signal strength indicator of the communication signal at the receiver satisfies the threshold, then decreasing the bandwidth allocated to the communication channel between the transmitter and the receiver". Accordingly, claim 1 defines a method where when the performance of a communication link is deemed to be unsatisfactory, but a signal strength at the receiver nevertheless indicates that the transmit power in link is sufficient, the bandwidth allocated to the channel is decreased to improve the unsatisfactory performance of the communication link.

For example, the Applicant describes on page 17, lines 6-15, of the written description that:

> If the measured signal power S is above the required threshold, it is assumed that external interference is responsible for channel

> performance degradation, and the channel is said to be interference-limited. In an adaptive channel allocation system, the radio spectrum may be scanned to find a suitable sub-band. The probability of success of this search is a function of the channel bandwidth. Reducing the channel bandwidth increases the probability of finding an undisturbed frequency segment. Similarly, in frequency hopping systems, reducing the channel bandwidth increases the number of channels available, which in turn reduces the probability of interference in the allocated frequency spectrum. For a fixed radio spectrum, this means that the hop channel bandwidth decreases.

In contrast, Dicker describes an arrangement for regulating the transmission power of mobile station in a mobile radiotelephone system. Dicker's arrangement uses conventional power control scheme such that when the transmission quality is determined to be poor and the information were transmitted with a low transmission power, a message for increasing the transmission power is transmitted to the mobile station. See col. 4, ll. 36-39. But if the poor transmission quality for a first mobile station is the result of interference from another mobile station, the other mobile station will also increase its transmission power under Dicker's power control scheme. This will result in little or no improvement in transmission quality for the first mobile station. Dicker's power control scheme does not address poor transmission quality that results from interference from other mobile stations.

The Office acknowledges on page 3 of the Action that Dicker does not describe decreasing the bandwidth allocated to the channel when the signal strength indicator of a communication signal from the transmitter satisfies the threshold, but asserts that Vuong discloses the absent feature. The Applicant respectfully disagrees.

The Office assets that Vuong discloses the absent feature at col. 9, ll. 37-46. But this passage merely states that "protocol messages to alter the communication bandwidth (I.e., shift up to a higher bandwidth or down to a lower bandwidth) are exchanged between the source and the destination devices as needed". The passage does not describe or suggest decreasing the bandwidth allocated to the channel when the performance of the channel is unsatisfactory if the signal strength indicator of the communication signal at the receiver satisfies the threshold.

Nothing in Vuong describes or suggests decreasing the bandwidth when the communication link is unsatisfactory but the received signal strength indication (RSSI) of the channel satisfies a threshold, as claim 1 requires. Instead, Vuong

expressly describes that any "such bandwidth alteration may be necessary depending on the application of the data transfer (e.g., video transfer)". Col. 9, ll. 34-36 (emphasis added). Indeed, the central focus of Vuong is to adjust the outbound data bandwidth in a channel to accommodate the bandwidth requirements of different communication applications. *See* Abstract.

In addition to the absent features identified above, the Applicant respectfully asserts that one of ordinary skill in the art would not be motivated to combine the cited documents as the Action asserts, and even if one had, one would have been more likely to arrive at something that did not work at all or not in the manner claimed by the present application.

As discussed above, Dicker describes an arrangement that uses a conventional power control scheme that increasing the transmission power of a transmitter when the transmission quality at a receiver is determined to be poor. Vuong describes an arrangement to dynamically adjust the allocated bandwidth in a communication channel based on the transmission needs of an application (e.g., whether sending voice, data, or multimedia video information).

Persons skilled in the art would not be motivated to incorporate the bandwidth alteration protocols described in Vuong into Dicker's power control process, as doing so would, for high-bandwidth requirement applications, defeat the central purpose of Vuong, i.e., providing adequate bandwidth for high-bandwidth applications. Moreover, neither Dicker nor Vuong disclose or suggest modifying Dicker's power control scheme to reduce the bandwidth of the channel when both the performance of the channel is unsatisfactory and the RSSI is satisfies a threshold. In the absence of any suggestion in the cited documents of how to make such a combination operable, one would have faced a serious engineering problem that naturally would have had a low probability of success without substantial experimentation and effort, especially in view of the need to modify the teachings of the documents.

Consequently, the motivation cited by the Office for combining Dicker and Vuong appears to come from the description of the Applicant's invention itself. Such hindsight reconstruction is improper. *See, e.g., Sensonics, Inc. v. Aerosonic Corp.*, 38 U.S.P.Q.2d 1551 (Fed. Cir. 1996); *In re Oetiker*, 24 U.S.P.Q.2d 1443, 1446 (Fed. Cir. 1992) (reversing an obviousness rejection and stating the "reason, suggestion,

or motivation" to combine (or modify) prior art "can not come from the applicant's invention itself. [Citation omitted.]").

Accordingly, claim 1 and its dependent claims are is believed to be allowable over the cited combination of documents for at least the above reasons. Moreover, independent claims 8 and 15 recite features that are substantially similar to the absent features of claim 1 identified above. Thus, these claims and their respective dependent claims are considered allowable for the same reasons that claim 1 is considered allowable.

For the foregoing reasons, it is believed that this application is in condition for allowance and an early Notice thereof is earnestly solicited. If any questions remain, the Examiner is invited to phone the undersigned at the below-listed number.

Respectfully submitted,

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